

**South Korea's Developmentalism and Contemporary Telecommunications
Industry (1990s to the Present): What changed, What remained the Same and
Why?**

by

Marie Kangyeon Kim

M.A., The University of British Columbia, 2013

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

The Faculty of Graduate Studies

(Asia Pacific Policy Studies)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

January 2013

© Marie Kangyeon Kim, 2013

Abstract

This paper seeks to explicate the diminishing significance of South Korea's "industrial policy practices" in the context of that country's economic development, using the telecommunications industry during the period 1990 – the present as a case study. Drawing upon the work of scholars like Peter Evans and Meredith Woo-Cummings of the Institutional School and Martin Hart-Landberg, who is associated with Historical Structuralism, I shall examine the idealistic and pragmatic/political components underpinning South Korea's developmental culture, embodied in the so-called Korean Developmental state. This paper acknowledges the "nationalistic" vision informing "Korean Developmentalism" and its influence on contemporary policymaking in IT-related industries throughout the 1990s and continuing up to the present. It also examines the decline in state autonomy in the area of policymaking due to political realignment (among state, private and foreign capital in the context of local policymaking) and loss of bureaucratic efficacy (due to the lack of organizational coherence) and the diminishing relevance of the state's "strategic" vision in the eyes of local private capital throughout the 1990s and continuing through to the present.

Two sets of empirical cases are examined here with a view to illustrating the challenges facing "strategic policymaking" during different periods. The first two pertain to the liberalization process in telecommunications markets (early 1990s-mid 1990s) and the 1994 policy of standardizing network technology in the domestic 2G market. Next, I shift my focus to examining the strategic policymaking process during the post-financial crisis (1997-1998) and post-WTO (1997) periods. First, I examine Ministry of Information and Communications (MIC)'s failure to groom "national champions" in the service sector in the context of the 2001-2003 M&A bidding war over Hanaro between AIG- Newbridge Capital and LG. Finally, this paper draws attention to another MIC policy setback during the period extending from the early 2000s through to the mid 2000s: the failure to coordinate network technology in the 3G mobile market owing to inability on the part of MIC to persuade local service providers to adopt its choice of technology.

Table of Contents

Abstract.....	ii
Table of Contents	iii
List of Tables	v
List of Figures.....	vi
List of Acronyms.....	vii
Acknowledgements.....	viii
Chapter 1: Introduction.....	1
1.1 Why Telecommunications?	1
1.2 Main Argument.....	2
1.2.1 Korean Bureaucracy: Perpetual Developmental Goals and Interventionist Norms.....	4
1.2.2 Social Embeddings and Politics in Policymaking and Changing Material Conditions and Political Realignment	5
Chapter 2: Framework: Social Embeddings as Bureaucratic Imperatives in the Contemporary Policymaking Process.....	7
2.1 The Rational Choice School, Institutional School of Thought, and Historical Structuralism	7
Chapter 3: Historical Origins of the MIC's Organizational Culture and Economic and Political Conditions in the 1970s.....	11
3.1 Organizational Character of the Ministry of Information and Communications (MIC) (1994-2008)	11
3.1.1 Historical Origins of Organizational Culture (1971-1979).....	12
3.1.2. Economic and Political Conditions and Efficacy of State's Policy: the 1960s and '70s Regime of Accumulation.....	12
3.2. The 1980s- the Early 1990s Version of the Korean Developmental State and Telecommunications Industry.....	13
3.2.1 Economic and Political Conditions underpinning policymaking and SOEs and MIC's Shared Vision and Mutual Dependence	15
3.2.2 R&D Support during the late 1980s to the early 1990s: MOC as a Provider of Entrepreneurial Resources	18
3.2.2.1 The 1992 R&D Project to Develop and Commercialize the Code Division of Multiple Access (CDMA) : Equal Division of Responsibilities	19
Chapter 4: Transition in Local Power Relations and Financial Liberalization (from the late 1980s to the mid-1990s).....	20
4.1 Financial Liberalization in the late 1980s: Lead up to the 1994 Tipping Point .	20
4.1.1 Rise of the Chaebols: '80s Liberalization of Non-Bank Financial Institutions (NBFIs).....	22
4.1.2 The 1994 Tipping Point and Liberalization of the Capital Account.....	23
4.2 Conflict of Ideas and Interests Within the Economic Policymaking Community : Economic Conservatives vs. Reformers	24
4.2.1 Power Rivalry between SOEs and MOC (1991-1994): The Tumultuous Process of Liberalization of Telecommunications Industry	25

4.2.2 Kim Young Sam Administration (1992-1997)'s Support for MOC's Organizational Interests and the Role of "Transnational Alliance"	28
Chapter 5: Structural Changes to the Global Telecommunications Industry and Continued Traditions in MIC's policy	32
5.1 Globalization (1995-the present), MIC's Response: Policy of Promoting "National Champions" (late 1990s to early 2000s) and Reduced Efficacy of Strategically Oriented Policy Initiatives	33
Chapter 6: The Changing Policymaking Environment in the Post Financial Crisis (1997-1998) Era	36
6.1 Imperatives to Liberalize Restrictions on Foreign Ownership in the pre-Crisis (1997-1998) Period	36
6.2 Economic Crisis and Kim DaeJung Administration (1998-2003) Support of Structural Reforms to Economic Institutions	37
6.2.1 Seoul's Imperative to Restore the Confidence of Foreign Capital: AIG-Newbridge Capital Win of Hanaro (2002-2003)	38
Chapter 7: MIC's Policy Setback in its efforts to Coordinate Network Strategies among Local Service Providers in the 3G Market	42
7.1 International Telecommunications Union (ITU)'s Standard Setting Effort (1999) and Emergence of W-CDMA as a de facto standard	42
7.2 Change in Policy Preferences for Korean Service Providers	43
7.2.1 MIC's pursuit of Traditional Values	44
7.2.2 MIC Coordinating effort for technology choices for domestic 3G market and the Policy Failure in Coordination	45
7.2.3 MIC's Licensing and Policy Outcomes	46
Chapter 8: The 2008 Institutional Restructuring and Reincarnation of Strategic Policymaking	49
8.1 Demise of MIC and Its Replacement by KCC (2008 to the present) as the Dominant Regulator and Policymaker in Telecommunications industry	49
8.2 Continuation of Strategic Policymaking: Ministry of Knowledge and Economy and the Telecommunications Technology Association (TTA)	50
8.3 Further Structural Changes to the Korean Economy in the later half of the 2000s and Decline of the State's Political Leverage over the Chaebols	51
Chapter 9: Conclusion	54
Bibliography	59

List of Tables

Table 1 Economic Growth, Exports and Exports/GDP in Korea	21
Table 2 Market Share by Manufacturers in Korean Telecommunications	
Market in 1995-1997	31

List of Figures

Figure 1 Technology Choices of Service Providers and 3G subscriptions.....	48
---	-----------

List of Acronyms

AMP Advanced Mobile Phone System

CDMA Code Division Multiple Access

ETRI Electronics and Telecommunications Research Institute

TDMA Time Division Multiple Access

FKI Federation of Korean Industries

GSM Group Special Mobile (Global System for Mobile Communications)

ITU- International Telecommunications Union

IMT-2000 Integrated Digital Service Network

KMT Korean Mobile Telecom

KT Korea Telecom

KTF Korea Telecom Freetel

MIC Ministry of Information and Communications

MOC Ministry of Communications

MOCIE Ministry of Commerce and Energy

MOTIE Ministry of Trade, Industry and Energy

MPT Ministry of Post and Telecommunications

USTR United State Trade Representatives

POSCO Pohang Iron and Steel Company

TTA Telecommunication Technology Association

Acknowledgements

Writing this thesis has taught me more about my weaknesses as a researcher than my capabilities. Without support and assistance of those around me, this paper would never have seen the light of day.

First, I wish to thank Professors Yves Tiberghien and Masao Nakamura, who guided the development of this thesis from beginning to end. Without their support and guidance, it would have been impossible for me to finish so daunting a task.

I am indebted to Professor Tiberghien for his guidance in designing the basic framework of this thesis and refining its tone. His passion for helping students, wide-ranging knowledge and openness to unorthodox ideas have all been key to my success.

Heartfelt thanks goes to Professor Nakamura for his patience and support in guiding me throughout the writing process. It was his suggestions and encouragement that are responsible for this paper being soundly empirically based and better organized.

I also wish to thank Peggy Meyer for her friendship and support during a time of personal difficulty. I only regret that owing to my preoccupation with this thesis I was unable to reciprocate.

Lastly, for their encouragement and support, I owe my parents more than I can ever acknowledge. They are the pillars upon which my academic achievements rest.

Chapter 1: Introduction

Is the concept of the traditional South Korean (henceforth, Korean) Developmental state still a viable one? The answer to this question varies, depending upon which of its aspects one focuses upon. For instance, referencing the extensive structural changes to the financial and corporate sectors that occurred during the post-financial crisis (1997-1998) period, development economists such as Crotty and Lee have declared, albeit somewhat hastily, its demise. (Park and Kim 2008, 117). Although this view has the virtue of highlighting the significance of the economic conditions underpinning the success of the 70s and 80s traditional developmental or ‘catch-up’ model, in ignoring both political conditions and state/bureaucratic organizational strengths, which were equally important to ensuring that success, it poses certain problems. One such problem is that during the period extending from the early 1990s up to the present, Seoul’s strategic policymaking for IT-related industries in general, and the telecommunications industry in particular, remained true to the developmental vision and bureaucratic cultural norms informing the traditional Korean Developmental model.

1.1 Why Telecommunications?

The conventional wisdom regarding Korean developmentalism holds that by the mid-1990s, “industry policy practices”, the hallmark of the developmental state had essentially disappeared from the economic scene. Most notably, the Economic Planning Board (EPB), which was responsible for long-term economic planning was terminated in 1994, and with it the traditional five-year plan. Nevertheless, in the case of the telecommunications sector, strategic policymaking aimed at supporting local vis-à-vis

foreign players continued through the 1990s and into the mid-2000s (Chang and Shin 2003, OECD 2001, Chen and Suh 2007).

Moreover, it is remarkable how little the institutional structure of the telecommunications sector changed between the period immediately following the financial crisis and 2008, given the massive institutional restructuring this sector would undergo during the same period. The Ministry of Communications (MIC) (1994-2008) would remain the principal policymaker and regulator until 2008 when it was replaced by the Korean Communications Commission (KCC).

1.2 Main Argument

This paper argues that although “conservative ideological” elements within the Korean government and bureaucracy remain influential today as evinced in the “strategic policymaking” conducted by the Ministry of Communications (1994-2008) and Ministry of Knowledge and Economy (2008-the present), key institutional strengths underpinning the traditional developmental state model (1970s-1980s) -- i.e., bureaucratic cohesiveness and a common vision shared by the public and private sectors -- with respect to the policymaking, has been severely compromised, due to three factors: the decline of state political leverage over private and foreign capital in the area of local policymaking; declining bureaucratic efficacy; and the diminishing relevance of the state’s “strategic” vision in the eyes of local private capital.

Drawing on the perspectives of both the Institutional School and Historical Structuralism, this paper argues that current IT policy, and telecommunications policy in particular, has retained the idealistic and normative character of the developmental vision

that once informed the traditional Korean developmental state. Thus, Seoul still seeks ways to promote the competitiveness of indigenous Korean companies within rapidly “changing” global IT markets. It further argues that the organizational norms of the Korean bureaucracy, as manifested in its active engagement in “strategic policymaking”, remain influential.

At the same time, with regard to the “efficacy” of “strategic policymaking” in high-tech industries, e.g., telecommunications and software industries, I argue that throughout the 1990s and continuing through to the present, the Korean developmental state model lost much of its relevancy owing to political realignment (i.e., among state, private and foreign capital in the context of local policymaking), declining bureaucratic efficacy (due to the lack of organizational coherence) and the diminishing relevance of the state’s “strategic” vision in the eyes of local private capital. In this regard, this paper draws attention to the “economic liberalization process” that begins in early 1990s and the gradual changes to the traditional policy alliance between Seoul and the Chaebols that occurred beginning in the late 1980s and extending into the early 2000s.

More specifically, by drawing attention to the changing political dynamics in policymaking in the context of the telecommunications industry from the 1990s through to the mid- 2000s, this paper highlights how economic liberalization -- which includes financial liberalization (early 1980s to mid-1990s) as well as the liberalization of the telecommunications industry, a process comprising privatization of SOEs (1990s-2003), elimination of top-down licensing regime (mid-1990s-1997) and eliminating ceilings on foreign equity ownership in the sock market (1997-2001), and introduction of cross-border mergers and acquisitions (1997-2001) -- compromised the state’s ability to

exercise leverage over private and foreign capital in policymaking.

Also examined in this paper is the critical effect of financial liberalization, which tipped the balance of power in favor of the private sector vis-à-vis the state. With deregulation of the financial market, Korean conglomerates, Chaebols, could, from 1994 on, raise money and invest abroad. Moreover, Chaebols could use their “exit option” as leverage against Seoul in negotiating policies. Thus, I further argue, that throughout the mid-1990s and extending to the mid-2000s, policymaking in the telecommunications sector came to be “increasingly” dominated by powerful interest groups that took advantage of the declining power of the state.

1.2.1 Korean Bureaucracy: Perpetual Developmental Goals and Interventionist Norms

Institutional School scholars such as Peter Evans (1995) locates at the heart of Korean developmentalism of the 1980s a powerful, disciplined and cohesive bureaucracy, capable of coordinating joint private-public projects. In particular, Evans draws attention to, on the one hand, its (1) “cohesive vision” grounded in the close-knit social and career ties of policymakers, and, (2) on the other, Seoul’s stable and amicable relations with its most important constituents, i.e, Korean conglomerates, Chaebols.

It was this vision (1) that underwrote the adoption of nationalistic/strategic goals and the attendant developmental projects, the aim of which were to facilitate Korea’s advance up the value-added ladder, i.e., transitioning from labor-intensive to capital and R&D-intensive industries, e.g., telecommunications (Mah 2007, 78; Lee 2009, 574; Pirie 2009) -- and all this despite changes to the structure of the Korean economy and a significant weakening of the state-Chaebol alliance due to a widening divergence in their respective outlooks.

In addition, this paper will seek to demonstrate that the decline in “political efficacy” on the part of the state did not mean that it no longer possessed a strategic vision or goals that were independent of interest groups. As will be shown, through the 1990s and up to the early mid late- 2000s, Ministry of Information and Communications (MIC) (1994-2008) sought repeatedly to assert its autonomy by insisting upon its right to engage in policymaking. For instance, despite the wave of institutional and corporate restructuring sweeping the Korean economy during the post-financial crisis period, i.e., from the late 1990s to the mid-2000s, state institutions overseeing the strategically important telecommunications industry emerged unscathed and continue functioning in their accustomed manner up until 2008 (Pirie 2009; Jho 2007; OECD2001). The Korea Communications Commission (KCC), for example, would remain firmly under the jurisdiction of MIC, unable to act independently until February 2008. For its part, MIC continued, in the aftermath of the financial crisis, to promote “national champions” through state-sanctioned M&As.

1.2.2 Social Embeddings and Politics in Policymaking and Changing Material Conditions and Political Realignment

In *Embedded Autonomy*, Evans cites the Korean developmental state of the 1980s as an exemplar of the Weberian type of state model. In particular, he identifies the coexistence of, on the one hand, a state organizational dynamics that ensure sufficient autonomy to resist corruption and capture by particular interest groups and, on the other, a dense network of ties/embeddings between the state and economic interests that serve to facilitate effective policy implementation.

However, regarding precisely how the “state” preserves “enough autonomy” in

policymaking, Evans restricts his analysis to the socialization process, wherein policymakers, according to the author, learn about the “collective goals” and historical imperatives of the organization as well as undergo collective experiences as members of a state organization -- experiences that inculcate a common sense of purpose, which, in turn, serves to keep shortsighted individualism in check while privileging organizational/collective goals (Evans 1995).

However, as the Korean policymaking experience accruing in the 1990s and 2000s would show, the nature of the relationship between state and private capital is also very much subject to material economic conditions and the attendant changes to political dynamics in policymaking.

Chapter 2: Framework: Social Embeddings as Bureaucratic Imperatives in the Contemporary Policymaking Process

Two major questions are addressed in this paper: 1) What are the motives of policymakers who, from the 1990s on, have seemingly embraced globalization and restructured economic institutions, accordingly, while at the same time seeking to retain traditional modes of policymaking? 2) Why has strategic policymaking on the part of Seoul become increasingly irrelevant over the course of the last two decades?

2.1 The Rational Choice School, Institutional School of Thought, and Historical Structuralism

Confronted in the mid 1980s by both increasing competitive pressures in export markets as well as rising labor costs at home, “Korean state managers” perceived that the country’s economic prosperity could no longer be based on low-wage labour and economies of scale, the formula prescribed by the 1970s-1980s traditional catch up model. Beginning in mid 1980s, Seoul voluntarily took steps towards liberalizing the economy by creating market-oriented institutions and introducing reforms. However, economic liberalization, which began in the mid 1980s and continued through to the early-1990s, would prove to be slow and piecemeal.

Scholars such as Geoffrey Garrett and Peter Lange of the Interest Group School - which is grounded in the rational choice tradition -- argue that the short-term immediate concern of “retaining office” will dominate over the long-term policy imperative of undertaking economic reforms /liberalizing the economy (Keohane and Milner, 1996). They predict that faced with having to choose between the two, most policymakers will opt for the former, the reason being that “individual interests” always trump the long-term economic concerns. This perhaps explains why Seoul introduced

competition in the telecommunications industry, while at the same time retaining “protectionist measures” in that industry, throughout the 1980s and 1990s, albeit to a limited degree.

The issue this paper takes with Interest Group School scholars like Lange and Garrett, however, lies with their reasoning and underlying assumptions, for example, the notion that the state has no autonomy vis-à-vis powerful interest groups, such as the Chaebols. These scholars assume that interest group politics would “perforce” dominate policymaking, thus ensuring the retention of at least some protectionist measures. Thus, for them, there is no need to specify the “conditions” under which interest group politics would prevail in the area of policymaking.

In addition, although the Interest Group School approach has proved useful in explicating short-term policy outcomes as well as those pertaining to individual cases, it has failed to explain some of the traditional policy choices on the part of the Korean state or the ways in which Seoul has intervened in the market (Hall 18), including perpetual engagement aimed at facilitating industrial transition and technology deepening, in addition to institution building practices aimed at realizing these goals, e.g., R&D support and coordination of competing interests.

Moreover, the very notion that the state is in the pocket of interest groups and that the latter’s interests “always” prevail in policymaking is highly problematic. Rather, one must distinguish between the decline in the state’s political leverage over interest groups and its propensity to continue to formulate strategic goals driven by the internal dynamics of state organizations. While it is true that the decline in state leverage over the Chaebols had the effect of undermining the efficacy of state policy, it does not follow that one

should equate the interests of the state with those of the Chaebols.

Indeed, what often emerges in the context of policymaking in telecommunications industry in Korea, throughout the 1990s and extending into the early 2000s, is the “rivalry” between MIC and the private sector/service providers in telecommunications industry, as both seek to gain the upper hand. With regard to the licensing process and state-sanctioned M&As in the telecommunications industry, the period through the 1990s and into the early 2000s witnessed a serious effort on the part of MIC to set a limit on the maximum amount of shares any single local company could own in an infrastructure-based telecommunications service provider, e.g., KT, and to implement measures aimed at preventing a single service provider from dominating all sectors of the telecommunications industry. At the same time, with regard to the licensing process, MIC sought to preserve its influence by insisting on retaining its policy tools and prohibiting foreign companies from owning the majority of shares in any incumbent service provider.

Thus, in explaining the decline in state leverage over the Chaebols in the area of policymaking in recent years, one must examine specific political and economic conditions -- i.e., structural changes to the national economy -- that have led to the domination of the policymaking environment by interest group politics and limited the state’s role in strategic policymaking.

Both the Comparative Institutional School and the tradition of Historical Structuralism, are drawn upon here to provide the analytical tools required to explain Seoul’s traditional policy choices and approaches to intervening in domestic markets

(Evans, 1995). Unlike their Interest Group colleagues, Comparative Institutional scholars, such as Peter Evans and Meredith Woo-Cummings, acknowledge the existence of state interests that are independent of those of interest groups. However, as mentioned earlier, the Institutionalist rationale for state behavior, or, more specifically, its explanation for how precisely the state preserves “autonomy” in policymaking, is limited, focusing merely on the “socialization process” and the historical factors shaping that process (Evans, 1995). To address these shortcomings, this paper examines the role of changing material/economic conditions in shifting the political balance and undermining the state’s ability to realize strategically-oriented policy goals. This requires drawing on the work of scholars within the tradition of Historical Structuralism such as Iain Pirie and Martin Hart-Landsberg as well as that of indigenous developmental economists such as Chang HaJoon and Shin JangSup.

In sum, this paper acknowledges the diminishing “capacity” of the state bureaucracy to realize strategically oriented policy goals that conflict with those of interest groups. In fact, this paper notes the increasing significance of “social embeddings” as a feature of the policymaking process/implementation in telecommunications through the 1990s and extending to the mid-2000s at the expense of state “autonomy”.

Chapter 3: Historical Origins of the MIC's Organizational Culture and Economic and Political Conditions in the 1970s

The Ministry of Information and Communication (MIC) (1994-2008) is a branch of the South Korean government charged with regulating and supporting the industrial sector, particularly telecommunications service providers and IT-related manufacturers. In 1994, the Kim Young Sam administration (1992-1997) consolidated the Ministry of Communications (MOC), the MIC's predecessor, with a view to minimizing the conflict inherent in implementing telecommunications policies. Prior to the creation of MIC, jurisdiction over IT-related manufacturers and service providers was divided between the Ministry of Industry and Energy (MOTIE) and the MOC, respectively.

3.1 Organizational Character of the Ministry of Information and Communications (MIC) (1994-2008)

Seoul assigned MIC jurisdiction over both parties; it also subordinated MOTIE to the newly created ministry. Moreover, MIC would adopt MOTIE's style of strategic management in its dealings with IT-related industries (Rhee 2009; and Kushida 2007, 491).

In 1995, politically driven legislation-- most notably the Framework Act on Information and Promotion Fund-- was enacted with a view to augmenting MIC legal and financial tools. In order to strengthen the legitimacy of the Ministry, particularly in the eyes of IT-related communities, and gain their support, the President appointed as its first president an expert in the area of IT. Also of critical importance, the 1995 restructuring had assigned MIC a broad range of jurisdictional powers, including the authority to designate CDMA as the nation's sole domestic digital standard.

3.1.1 Historical Origins of Organizational Culture (1971-1979)

In a sense, MIC (1994-2008) and MOTIE (1977-2007) inherited the so-called traditional industrial policy practices from the Ministry of Commerce and Industry (MCI) (1948-1976). In particular, rooted in the highly centralized and powerful bureaucratic culture that was a hallmark of the Park JungHee regime (1962-1979) whose total control over the financial sector and foreign trade had enabled it to push through the HCI catch up strategy, -- MCI (1948-1976), MOTIE (1977-2007), MIC (1994-2008), and Ministry of Knowledge and Energy (MKE) (2008-present) all enjoyed a broad range of jurisdictional powers, which included regulating and promoting state projects and promoting local industries.

3.1.2. Economic and Political Conditions and Efficacy of State's Policy: the 1960s and '70s Regime of Accumulation

The chief factor underpinning the efficacy of state policy in the area of institution building was itself grounded in large measure in the peculiar economic conditions existing during the regime of accumulation (1962-1979). Over the course of this period, the state maintained strict control over the all forms of financial instrument throughout the 1960s-1970s. Seoul directly controlled commercial banking, acting as a conduit for foreign loans and aid; it also intervened in both the stock and security markets (Suh and Chen 2007, 30). For example, following the introduction of the *1962 Law of the Bank of Korea*, Seoul expropriated the majority of bank shares and placed restrictions on the voting powers of the private owners, effectively placing the banking system under government control (Chen and Suh 2007, 30). The Ministry of Finance (MOFE), moreover, assumed responsibility for major investment decisions (Shin and Chang 2003,

71). As the sole conduit of foreign capital, Seoul could wield considerable leverage over the Chaebols (Kang 2001). Exclusive access to global capital markets and total control over the national financial system allowed it to manipulate interest rates. Indeed, one of the most peculiar features of state policy during this period lay in the state's extensive use of monetary policy in the form of arbitrary interest rates to provide targeted sectors with "policy loans".

It can also be claimed that control over the country's financial system, with the enormous political leverage over business interests it conferred, was the single most important factor in enabling the state to direct national economic development. Seoul would use fiscal and monetary policies as a stick-and-carrot approach aimed at bending the private sector to its will. In hindsight, the dominant position Seoul enjoyed was possible only because corporate financing and production remained primarily nationally based.

Initially, Korean firms were reluctant to invest in sectors that were unprofitable and presented technological challenges, e.g., chemicals, electronics and ship building (Pirie 2009, 69). The incentives for transitioning from light to heavy industry would be provided by Seoul, which was prepared to offer everything the Chaebols could possibly wish for with one exception: freedom from state control.

3.2. The 1980s- the Early 1990s Version of the Korean Developmental State and Telecommunications Industry

In the early 1980s under President Chun Doo Whan (1981-1986), Seoul set about establishing a new regulator for telecommunication service providers. The Ministry of

Communications (MOC), predecessor to the MIC, would have jurisdiction over three telecommunications industries: wireline, data processing, and wireless line. In 1981, MOC established the Korean Telecommunications Authority (KTA) (now KT) (Chen and Suh 2007, 82). In response to the growing demand for data-related communications technology, MOC founded the Data Communications Corporation of Korea (Dacom, now LG) in 1982. In 1984, MOC establish a subsidiary, KMT, to provide car-phone service based on first generation, analog cellular technology.

It is important to note that Seoul's commitment to institution building in the telecommunications industry during the early 1980s was undertaken against the backdrop of major changes to the traditional developmental model that was dominant during the 1960s and 1970s. By the late 1970s, reform-minded policymakers, represented by the Economic Planning Board (EPB) (1961-1993) and Ministry of Finance and Economy (MOFE) (1948-1993), had concluded that adhering to the traditional development model-- the key elements of which were low-wage labor, nationally based production and local savings-- could no longer assure future economic growth. For them, the solution, lay in advancing up the value-added ladder, which was to be achieved by ending state-led industrialization and strengthening market-oriented institutions.

During the 1960s and 1970s and into the early 1980s, Seoul adopted a top down approach, where a state formulates a series of five year plans (1962-1993) targeting specific goals and objectives. Beginning in the mid-1980s, however, centralized decision-making was de-emphasized and there emerged a "partnership" between the public and private sectors. In its *1985 Industrial Development Law* Seoul formalized this new

approach by introducing “function-oriented” policies, e.g., R&D support, aimed at promoting capital and R&D intensive industries -- a marked departure from the traditional sector-specific and company-specific approaches (Mah 2007, 80).

In telecommunications industry in particular, the period extending from the early 1980s to the early 1990s saw MOC both formulating and implementing successfully joint public-private R&D programs i.e., developing CDMA, a second generation mobile network technology; policy of standardizing the latter (1994-1995); developing TDX (1986-1992), an automatic telephone switching system; policy of creating a national basic information system (NBIS); and formulating policy of building a high speed cable and Internet network, a project designated Korean Information Infrastructure (1995-2005).

3.2.1 Economic and Political Conditions underpinning policymaking and SOEs and MIC's Shared Vision and Mutual Dependence

For both political and economic reasons, during the course of the 1980s, the state and state-owned enterprises (SOEs), e.g., KTA, KMT, and Dacom, operating in the telecommunications service sector, became locked in a relationship that can only be described as one of “mutual dependence”. In the late 1970s, the emergence of a large urban middle class produced a political situation ripe for democratization. Having served in the previous military government and seized power through a *coup d'état*, the Chun DooHwan administration lacked mass support. Any hope of gaining legitimacy rested with the administration's ability to raise the country out of poverty through rapid industrialization. This approach, however, required cooperation on the part of local

capital, i.e., manufacturers and service providers, in getting development projects under way.

Through the 1980s and prior to the privatization policies that were implemented beginning in 1992, Korean Telecom (KT), SOE -turned-private company as a major player in the conventional telephone market, served MOC as a policy tool, implementing its policy vision and serving as a bargaining chip in negotiations between the Ministry and sector players. Among other things, KT functioned as “a guaranteed customer” for MOC procurement policy relating to MOC-led R&Dⁱ and infrastructure projects.

Moreover, given its status as both a major shareholder in KT and chief regulator after 1992 when privatization began, MOC wielded significant bargaining power with regard to policymaking vis-à-vis the private sector and foreign capital. Revenue generated by KT, moreover, helped to strengthen the Ministry’s bargaining position.

On the other hand, given their low level of development in terms of organizational, financial, and R&D capabilities during the 1970s and 1980s, SOE service providers looked to the state, i.e., MOC, for financial, entrepreneurial and R&D support. Through the 1980s and up to the early 1990s, MOC remained dominant vis-à-vis the service providers in terms of the resources at its disposal -- financial, entrepreneurial and R&D resources. For this reason, creating institutions capable of conducting R&D, organizing projects for developing and diffusing technology, and allocating investment fell within the purview of the state, in this case the state-sponsored research institute ETRI, a branch of MOC (Evans 1995, 141-142).

Given the symbiotic relationship that existed between MOC and KT up until at least 1997, the SOE-turned-private company, could enjoy a monopoly. However, in August 1997, MOC introduced a SSP segment, with the intention of creating competition in a wireline service market previously dominated by KT (Yoo 2003; Rhee 2009). The other major incumbents, e.g., Dacom (acquired in 2001 by LG) in the data-related services market and KMT (acquired in 1994 by SKT) in the mobile phone market, also enjoyed near monopoly status within their respective markets through 1980s as per state policy (Chen and Suh 2007). During this period, SOEs could use local markets as “a spring board” for entering foreign markets while enhancing their organizational and technology capabilities/competencies in preparation for open competition that would follow the conclusion of WTO negotiations aimed at liberalization of telecommunications industries.

The nature of the relationship between MOC and KT would begin to change in the early 1990s with the privatization of both KT and KMT and the decline in MOC control over the operations of service providers. Furthermore, with Seoul’s liberalization of capital control from 1994 onwards -- liberalization of Seoul’s restrictions on the ability of Korean banks to borrow foreign currencies from global capital markets -- these newly privatized service providers began turning to global capital markets for investment capital (Pirie 2009, 98; Chang and Shin 2003). Changes in the way corporations financed their capital requirements had the effect of driving a wedge between service providers and MOC, as the former no longer depended on the latter for financial support.

3.2.2 R&D Support during the late 1980s to the early 1990s: MOC as a Provider of Entrepreneurial Resources

Throughout the 1980s, both Seoul and the major IT exporters were preoccupied with reducing royalty payments on foreign technologies, the former because it wished to reduce balance-of-payment deficits, the latter costs. For instance, Korea's firstⁱⁱ generation cellular service industry relied heavily on an analogue standard developed by AT&T, known as Advanced Mobile Phone Service (AMPS), for which it had to pay high royalties (Kushida 2008, 237). Having witnessed, in the mid-1980s, a shift in the international telecommunications market from analogue to digital wireless technology, MOC launched in 1988 an R&D project aimed at designing and developing its own wireless digital transmission technology.

Given that the difficulty in acquiring commercially viable technology lay not only in the costly development process but also in breaking into oligopolistic distributional channels and global IT industry networks, MOC had envisioned, from very early on, large scale R&D projects that would not only develop but also commercialize and "standardize" mobile transmission technologies, i.e., CDMA for the 2G mobile market.

The term "standardization"ⁱⁱⁱ as used in the IT industry, refers to the process of selecting a particular technology for the purpose of ensuring compatibility between products and services (Jho 2007, 126-127). Standardization as a state policy is not without controversy. From the point of view of "free traders", owing to the compatibility problem and the potential for raising barriers to fair trade, standardization is highly discouraged. On the other hand, for local suppliers, standardization is sometimes essential

given that the lack of “standards” can create higher barriers to entry owing to uncertainty (Kwak 2011, 793).

3.2.2.1 The 1992 R&D Project to Develop and Commercialize the Code Division of Multiple Access (CDMA) : Equal Division of Responsibilities

When in 1992 it launched an R&D project aimed at developing technology, MOC contracted with Qualcomm, then a small US start up firm and CDMA patent holder, to train ETRI personnel (Kushida 2008, 242). For its part, Qualcomm agreed on a royalty payment for the use of CDMA. At this time service providers KT, KMT, and Dacom were still SOEs under the control of MOC, and as such relied on the Ministry for R&D support.

The nature of the relationship between the Chaebols/manufacturers and MOC was very different from that between MOC and its service providers. In particular, the financial strength and R&D capabilities of the manufacturers were superior to that of MOC. The four largest Korean manufacturers had by 1995 come to account for 9.3 % of value added GDP; their R&D expenditures, moreover, accounted for the majority bulk of total R&D expenditure at the national level (Suh and Chen 2008)

Chapter 4: Transition in Local Power Relations and Financial Liberalization (from the late 1980s to the mid-1990s)

Broadly speaking, through the 1960s and 1970s, the HCI-led catch up strategy, along with the accompanying system of centralized economic governance whose hallmark was the Chaebol-bank-state nexus, represented the foundation of the country's economic institutional arrangements. However, the late 70s had witnessed important developments that posed a threat to the viability of this model.

4.1 Financial Liberalization in the late 1980s: Lead up to the 1994 Tipping Point

In 1980, the country was hit by a recession precipitated by the 1979 oil shock. Inflation was running at over 25 percent, the economy contracted by 5.2 percent over the course of the year, and the country was facing an acute foreign exchange crisis. Seoul had no choice but to turn to Tokyo and international financial institutions (IFIs) for sizable loans with which to ease the foreign exchange problem and bring inflation under control (Pirie 2009, 76)

Table 1 Economic Growth, Exports and Exports/GDP in Korea

Year	Real GDP Growth (Percent)	Export Values (US\$ billions)	Export/GDP (Percent)
1962-1966	8.0	1	7.7
1967-1971	9.7	3	13.7
1972-1976	8.4	22	27.8
1977-1981	6.1	77	31.5
1982-1986	8.7	141	34.4
1987-1991	9.2	307	32.1
1992-1996	7.0	510	28.7
1997-2001	4.3	734	42.8
2002-2006	4.8	1,239	31.2
2007-2009	2.5	1,186	42.2

(Source: IMF International Financial Statistics Yearbook 2004; The Bank of Korea, Economics Statistics Yearbook 2010)

This crisis enabled reform-minded policymakers, represented primarily by the Economic Planning Board (EPB) to push through key elements of a reform agenda. For them, the 1979-1980 crisis demonstrated the inherent limits of the catch-up model, whose sources of corporate financing and labour were locally based and thus inadequate, to achieving the kind of growth rates required to tap the country's full economic potential (Pirie 2009, 76). The reformers threw their weight behind General Chun DooHwan, who in 1980 staged a coup d'état that would propel him into the presidential office.

Under the Chun DooHwan presidency (1981-1986), the EPB pushed through key reform measures, including liberalizing the "internal" financial structure (Pirie 2009, 83). This was something quite different from liberalizing the external financial structure, which, when it did occur from 1992 onward, allowed the Chaebols to borrow and invest abroad. Rather, liberalizing the internal financial structure involved privatizing and deregulating the so-called non-bank financial institutions (NBFIs) -- insurance firms,

investment and finance companies (IFCs) and investment trust and securities firms (Pirie 2009, 81). This move was accompanied by liberalizing interest rates and reducing the frequency with which Seoul issued policy loans.

4.1.1 Rise of the Chaebols: '80s Liberalization of Non-Bank Financial Institutions (NBFIs)

Equally important, liberalization of the NBFIs over the course of the 1980s was followed by a scramble on the part of the Chaebols to enter the non-banking financial sector, a move that was facilitated by the close personal connections their executive officers had in the public sector. Every major Chaebol would end up controlling at least one securities firm. The ten largest Chaebols control 40 percent of insurance companies. It is noteworthy that by the early 1990s the Chaebols had transformed themselves into industrial and financial giants (Pirie 2009, 81). Henceforth, they would use internal channels to secure financing.

These profound political and economic changes seriously undermined the political leverage of Seoul over the Chaebols in both the regulatory and policymaking environments. As mentioned earlier, under the old bank-state nexus, the state used policy loans and its power to direct investment flows as leverage with which to bend the Chaebols to its will. Throughout the 1980s and extending into the early 1990s, new economic conditions brought about a shift in the “political” relationship between state and Chaebols: once hierarchical and symbiotic, it was now marked by competition and rivalry. What emerged during this period was a partnership of equals.

4.1.2 The 1994 Tipping Point and Liberalization of the Capital Account

Although by 1994 five of the six principal state banks had been privatized, Seoul would retain control over “outgoing” FDIs until 1993. Thus, up until that time, it had been impossible for the Chaebols to move significant sums of money in and out of the country without government approval (Pirie 2009, 83). Coming under increasing competitive pressures owing to rising interest rates -- the 1980s had witnessed deregulation in this area— the Chaebols raised a chorus of protests against Seoul’s prohibition on borrowing cheap money abroad.

From the perspective of powerful ministries, such as the Ministry of Finance and the Economy (MOFE) in charge of overseeing strategic policymaking and the development of long-term strategies, the question of whether the state would lose control over the Chaebols was a “relatively” minor concern. Rather, for MOFE, always focused on strategic considerations where the country’s place in a global capitalism was concerned, the key policy priority lay in Chaebols reducing debt levels and improving profitability prior to the entry of foreign competitors into domestic markets (Pirie 2009).

Nevertheless, the battle between reformers and Chaebols ended in a victory for the latter -- a foregone conclusion given that Seoul could scarcely do without the Chaebols if it was to implement its policies with any hope of success. The Chaebol’s overpowering economic clout and Seoul’s dependence on their cooperation, compelled MOFE to capitulate, which meant permitting the Chaebols to raise money abroad. Thus, it was in 1994 that Seoul liberalized a series of capital controls.

In addition, the events described above demonstrate that the Chaebols have emerged as powerful interest groups capable of challenging the state by withholding their cooperation -- a major concern for state bureaucracies that depend on such cooperation to maintain their organizational legitimacy.

4.2 Conflict of Ideas and Interests Within the Economic Policymaking Community : Economic Conservatives vs. Reformers

Broadly speaking, through the 1990s and up to the present, the economic policymaking community in South Korea has been dominated by two ideologically distinct and socially and politically insulated state organizations/interest groups. One group -- often labeled “reformers”, owing to their anti-Chaebol, pro-competition measures -- are represented in organizations like the EPB (1961-1993), Ministry of Finance (1994-2008), Ministry of Strategy and Finance (MOSF) (2008-present), and Fair Trade Commission (1981-the present). The other, which is comprised of economically conservative state organizations and groups, is represented in MOTIE and MIC, whose policies are pro-Chaebol.

Throughout the 1990s, the dominance of economically conservative interest groups and state organization interests was reflected in the slow, piecemeal approach to liberalizing equity markets -- e.g., by easing restrictions on foreign ownership and management in the corporate sector. In this regard, it is noteworthy that Seoul’s regime for overseeing incoming FDIs and the equity market still remained “complex” even after the regime over outgoing FDIs is completely liberalized by 1994. In effect, by the mid-1990s, efforts on the part of reformers aimed at dismantling the old regime, whose

hallmark was the bank-state nexus, and developing new market-oriented institutions to replace it had stopped far short of achieving its objectives, for both political and organizational reasons.

In fact, in contrast to the MOFE and EPB, who had initially led the restructuring of the financial industries, the MOC, the dominant regulator and policymaker for the telecommunications sector, showed little interest during the early 1990s in liberalization and restructuring the institutional structure. At the time, MOC had important development projects underway, e.g., infrastructure and R&D projects relating to construction of a high speed Internet and cable network; it was also busy promoting 2G handset and mobile network technology, which it viewed to be critical to propelling the telecommunications industry towards greater competitiveness in global markets. Executing these tasks successfully required, as MOC was well aware, that it remain the dominant regulator and policymaker.

4.2.1 Power Rivalry between SOEs and MOC (1991-1994): The Tumultuous Process of Liberalization of Telecommunications Industry

In contrast to the liberalization of the financial sector, which was primarily driven by the state, i.e., EPB and MOFE, the impetus for liberalizing telecommunications came from abroad. In 1990, Washington exerted pressure on Seoul to introduce competition in telecommunications industry. Directing criticism at MOC procurement policy for TDX, which led to a drastic drop in AT&T technology exports to Korea, the United States Trade Representative (USTR) in 1988 identified Korea as one of the “priority foreign countries”; it also threatened retaliatory sanctions unless Seoul committed itself to

introducing competition in the telecommunications market (Yoo 2004, 173). This had the effect of jump-starting negotiations, which resulted in a series of “Records of Understanding” between the two countries, beginning with a bilateral agreement on value-added services concluded in June 1991 and followed by a more comprehensive bilateral agreement in February 1992. To avoid conflict with its major trading partner, the US, Korea embraced liberalization in the telecommunications sector, announcing in 1991 a statutory amendment (Jin 2011, 150-151). In addition, MOC pledged to take steps to privatize KTA^{iv} (Yoo 2004, 173; Jin 2009, 150).

Moreover, contrary to the 80s, the 90s witnessed the emergence of new political challenges as the KT, Dacom, and KMT began privatization and started to prioritize their short-term profit maximization interest, over long-term strategic vision, marking MOC strategic policy vision. For its part, MOC experienced a relative decline in policy leverage, while KT and Dacom become more independent and effective in both organizational and financial terms. Rather, it was MOC that now required the participation of KT and Dacom in state-led infrastructure and R&D projects.

Against this backdrop of internal and external pressures, the liberalization process proved particularly tumultuous, marked by frequent revisions of the 1990 basic telecommunications laws within the space of three years and reflecting a conflict of both interests and ideas (Jho 2003, 138). Amid all this tumult, MOC strove to retain what control it could over the liberalization process.

The 1990 telecommunications law, for example, reflects the Ministry’s determination to maintain control over the timing of liberalization of specific markets and

over ways in which it intervenes in markets. Among other things, by compartmentalizing regulatory regimes across the entire service provider sector, the 1990 basic telecommunications law provided the legal basis for the Ministry to “manage” competition in different telecommunications markets. Thus, for instance, services were divided into three categories^v: a General Service Provider (GSP) category, comprising firms that owned network facilities and provided voice services^{vi}, i.e., KT^{vii}, a Specific Service Provider (SSP) category consisting of firms providing paging services, cellular phone services, and airport communications ports; a valued-added Service Providers (VSP) category comprised of those providing computer networking, intercompany electronic data interchanges, and electronic mail and data-related services (Yoo 2004, 173).

Fearing the inordinate influence of KT and Dacom in telecommunications markets, MOC had, under the 1990 law, prohibited these service providers from entering other segments of the market. For instance, as a major provider of wireline service, KT was prohibited from entering the mobile market, whereas Dacom was barred from the wireline service market. Moreover, under the 1990 regime, prospective new entrants to the wireline service market were subject to the most stringent ownership restrictions, including an absolute prohibition on foreign ownership (Yoo 2004, 175). For both the mobile service and wireline markets, MOC employed a top-down licensing regime aimed at controlling entry; the latter was also subject to a range of ownership restrictions, including limiting foreign ownership to no more than one-third of any domestic firm (Yoo 2004, 174).

Nevertheless, as it turned out, the 1990 regime proved to be short-lived. In a second restructuring in 1992, MOC lifted these restrictions and issued licenses allowing KT to enter the mobile market beginning in 1994 and Dacom the domestic long-distance market beginning in 1995 (Rhee 2009, 157; Yoo 2004, 175). This was the compromise MOC had to make if it wished to recruit KT and Dacom for a project involving construction of a nation-wide high-speed Internet and cable network: KII (1995-2005).

For their part, KT and Dacom were reluctant to participate in the project^{viii}, given the burdens and risks that such a long-term investment would involve (Lee 2011). Moreover, the prohibition on foreign ownership in the wireless market would be lifted in 1994 upon Washington's request (Yoo 2004, 175).

4.2.2 Kim Young Sam Administration (1992-1997)'s Support for MOC's Organizational Interests and the Role of "Transnational Alliance"

As mentioned above, in 1992, when MOC launched the CDMA R&D project aimed at developing and diffusing this technology, it also planned to standardize CDMA as the sole *de jure* technology in Korea's 2G mobile market. However, when the time was ripe for action, the policymaking environment, i.e., in 1994, proved to be politically challenging.

The most critical factor contributing to the weakening of MOC vis-à-vis the manufacturers and service providers during the period 1990 -1994 stemmed from organizational divisions within the Korean bureaucracy. In the early 1990s, MOC and MOTIE had engaged in a bureaucratic rivalry over jurisdictional control of both the IT-related manufacturers and service providers (Kushida 2008, 243).

MOTIE, whose principal constituents had traditionally been the manufacturers, wished to bring the telecommunications service sector under its jurisdiction; MOC, long associated with the service providers, sought jurisdiction over the manufacturers. The rivalry between the two complicated the standardization process for the 2G mobile market as each advocated using a different technology for the Korea's 2G mobile market. For instance, while MOC favoured CDMA, upon whose R&D it had spent enormous sums, MOTIE TDMA.

What ended this policy debacle was the Kim Young Sam administration's (1992-1997) political support for MOC. Because one of its chief priorities lay in promoting IT-related projects -- Korean Information Infrastructure (KII) (1995-2005) and CDMA standardization-- the administration was keen to reduce conflict and to accelerate the decision-making process relating to the these projects (Rhee 2009; Kushida 2007). In 1994, the Ministry of Communications was superseded by the Ministry of Information and Communications (MIC), which subsumed the IT-related jurisdictions formerly held by MOTIE, the Ministry of Science and Technology (MST), and the Ministry of Information. Thus, the 1994 reshuffling had the effect of centralizing the system of governance under MIC's authority. MIC's broadened jurisdictional powers included the authority to designate CDMA as the nation's sole 2G mobile network standard (Kushida 2007, 491-492).

Owing to its enhanced organizational strength and jurisdictional powers, MIC succeeded, in 1994, in "effectively" enforcing (in 1994) the condition for license, a condition that requires prospective entrants to the 2G mobile service market to use CDMA. Shinsegi, a newcomer to Korea's mobile market, initially proposed building a

GSM-based network, given that CDMA had yet to be commercialized internationally. MIC however rejected this proposal outright (Kushida 2008, 243). SKT, along with other new entrants, KTF, LG Telecom and Hansol, committed themselves to CDMA.

Also noteworthy is the role the manufacturers played in ending the bureaucratic turf war. As prudence dictated, they hedged their bets by participating in both the MOC and MOTIE R&D projects (focused on the CDMA and TDMA standards, respectively). However, the strategic importance of the US market and Qualcomm's^{ix} success in persuading US service providers to approve CDMA led Korean manufactures to throw their support behind MOC's CDMA (Kushida 2008, 243).

It is also noteworthy that by the mid-1990s, the traditional alliance between the manufacturers and MOTIE, which had been in decline for some years, was superseded by a new transnational alliance comprising Qualcomm, US service providers and the Korean handset manufactures. This new development would further attenuate the state role in the area of industrial policy.

Table 2 Market Share by Manufacturers in Korean Telecommunications Market in 1995-1997

Handset Manufacturers	1995	1996		1996
		Analog	Digital	Analog and Digital
Samsung	44%	41.5%	44.5%	59%
Motorola	51%	40.6%	0.5%	-
LG	3%	5.7%	24.3%	33%
Hyundai	2%	3.8%	9.2%	4%
Qualcomm		0%	13.6 %	-
Others		8.5%	4.9%	-
Total	100%	100%	100%	100%

(Source: Jho 2003, 258)

Chapter 5: Structural Changes to the Global Telecommunications Industry and Continued Traditions in MIC's policy

The period between the late 1990s and the early 2000s witnessed a sea change in the structure of the global telecommunications industry. Beginning in the late 1990s, technological advances—more powerful microchips and digital wireless transmission technologies, e.g., CDMA and GSM—were helping to bring about the convergence of previously segmented markets (e.g., wireless communications and the Internet) into a single global market as well as create a new market segment for what would come to be known as “multi-media mobile service market” (Jho 2003).

The 1997 WTO agreement on telecommunications and the advent of transnational connectivity, associated with the 3G mobile service/ International Mobile Telecommunications (IMT)-2000, would prove particularly significant in fostering convergence. The latter, more generally known as “transnational roaming” technology/FPLMTS or UMTS, facilitated transnational connectivity by linking disparate systems of terrestrial and satellite-based networks. This new connectivity would signify to the world that future competition in the 3G market would revolve around the capability of service providers to offer multiple/integrated services, including “mobile data services”-- services that allow subscribers to access the Internet via cellular handsets-- and a “collectivity”/roaming feature that covers a wide range of geographical areas on a global scale.

5.1 Globalization (1995-the present), MIC's Response: Policy of Promoting "National Champions" (late 1990s to early 2000s) and Reduced Efficacy of Strategically Oriented Policy Initiatives

In 1999, in anticipation of imminent competition in the 3G market, whose core technology was associated with data mobile services, which featured a combination of mobile and broadband technologies, major local providers such as SK entered the broadband service segment by launching Cyber Service. Their aim in making this move was to acquire broadband network technology (Jho 2003, 318). LG followed suit by directing LGT, at the time its mobile service subsidiary, to acquire shares in Dacom, a long distance service provider and those in Hanaro, an international service provider, (Jho 2003, 318). The broadband market also underwent integration/convergence as the demand for "mere" conventional telephone service declined while the popularity of "bundling" services rose. In 1999, the long-distance service provider Hanaro offered free broadband service with every basic telephone subscription (Kushida 2007, 495). Onse, a competing long-distance service provider followed suit.

The 3G roaming feature dictated that to compete successfully, service providers had to be "plugged in" as well as seek opportunities to form strategic alliances with foreign partners, the latter representing the best means to expand the geographical coverage of roaming services associated with the 3G market. In 1999, SKT signed an agreement with Nokia to cooperate in W-CDMA R&D efforts. LG signed an agreement with Japan Telecom to establish a global network based on W-CDMA, one that included roaming (Jho 2003, 325).

From MIC's point of view, these expansionary strategies, and the attendant risk of rising corporate debt levels and inflation, were worrisome -- all the more so as the

country had only just been bailed out of financial crisis (1997-1998) (Kushida 2008). In addition to such generic concerns, MIC had its own “organizational interests” to protect its dominant policymaking position in the telecommunications industry in general and its discretionary power over the management decisions of service providers in particular.

For its part, MIC faced a dilemma: improving network technologies and the competency of local service providers in the 3G market, something the Ministry expected would expose mobile and broadband service providers to full-blown foreign competition, could be undertaken only by raising debt levels and increasing the risk of bankruptcy. To achieve the former while avoiding the latter, MIC resorted to a familiar tactic, namely, selecting and supporting a small number of “national champions”, in this case SK, LG, and KT. “Underhandedly”, MIC exerted pressure on service providers to proceed with state-sanctioned M&A

For MIC, state-sanctioned M&A meant the one-sided acquisition of small service providers by large ones (Kushida 2008). This approach reflects the Ministry’s determination to defend major service providers against the imminent threat of full-blown competition in the 3G market in general and to preserve local capital’s dominant position in the “management” of service providers. MIC also believes that in preserving the dominant position of local capital in management, i.e., precluding the possibility where foreign companies would acquire controlling shares in major carriers/service providers, MIC could retain its influence over policymaking (Jho 2003, 322). Also, MIC continues to guard against the possibility of any single local player dominating its rivals.

Apparently, MIC’s efforts at imposing M&A was initially met with strong resistance on the part of service providers, who believe the state has no right to

undermine free competition (Rhee 2009, 163). What made the service providers capitulate to MIC in 1999 and proceed with M&A was MIC's licensing regime for the 3G mobile service and competitive market pressures (Rhee 2009, 163).

In 1999, MIC announced it would deploy a screening system to select prospective service providers for the 3G market. As it turned out, the financial burden of constructing the 3G network prompted local service providers to proceed with M&A (Jho 2003; Rhee 2009). Saddled with increasing debt incurred from investing in upgrading networks for the 3G service market, Shinsegi, Hansol, Hanaro succumbed to MIC pressure to proceed with M&A. For instance, by June 1999, the debt ratio for LG stood at 225 percent and 1.363 percent for KTF (Jho 2003, 321). In tying up so much capital in constructing networks (\$215 million (US) for base stations alone), SK struggled to maintain profitability. Indeed, the combination of expansion and competition exposed the vulnerabilities of the smaller service providers -- vulnerabilities exacerbated by the contradictory policies Korean financial institutions followed in the immediate aftermath of the 1997-1998 financial crisis^x. Consequently, Thrunet and Onse would file for bankruptcy in early 2003; Hanaro, having flirted with acquiring Dacom, Powercomm, Thrunet, and Onse, found itself badly strapped for cash (Yoo 2004, 169).

Chapter 6: The Changing Policymaking Environment in the Post Financial Crisis (1997-1998) Era

Although the Kim Young Sam administration (1992-1997) had envisioned an MIC with enhanced organizational capabilities to be achieved by concentrating within it additional telecommunications-related jurisdictions, broad changes to the country's economic structure and economic institutions in the later half of the 1990s would undermine the Ministry's strategic policymaking functions.

In the second half of the 1990s, MIC faced mutually contradictory policy priorities. On the one hand, it adhered to the traditional organizational vision of promoting local ownership and management control of the nation's communications infrastructure; on the other, it was confronted by the growing need to attract greater foreign investment and to respond to additional pressure from Washington to liberalize foreign ownership.

6.1 Imperatives to Liberalize Restrictions on Foreign Ownership in the pre-Crisis (1997-1998) Period

It is important to point out the role of structural changes to the Korean economy in the later half of the 1990s that led MIC to amend its policy on foreign ownership. With regard to internal factors, what led MIC to adopt a policy of opening the equity market/lifting foreign ownership restrictions in the network-based service market vis-à-vis insisting on local ownership/management was the enormous increase in overseas investment led by local capital and the Chaebols. Between 1993 and 1996, the annual level of outward Korean FDI grew from \$1.88 to \$6.17 billion (Pirie 2009, 101). Facing increasing reluctance on the part of the Chaebols to participate in state-led R&D, and infrastructure projects and job creating efforts in the telecommunications sector, and

experiencing difficulty in fulfilling policy objectives, MIC amended its policy in favour of foreign ownership (Jho 2003, 324). The 1997 Telecommunications Business Act authorized foreign ownership of up to 33 percent of facility-based network providers with a single exception, i.e., KT (Yoo 2003, 177). These changes created favorable political conditions for the more drastic reform efforts to come.

6.2 Economic Crisis and Kim DaeJung Administration (1998-2003) Support of Structural Reforms to Economic Institutions

Indeed, during the 1997-1998 economic crisis when the Kim DaeJung administration (1998-2003) took a strong position on restructuring the Korean economy and eliminating the remnants of the old regime, in particular those associated with the Bank-Chaebol nexus, the Kim DaeJung administration (1998-2003) could count on the support of elite political circles and policymaking communities. With the onset of financial crisis, public anger was directed at the previous administration, i.e., that of Kim Youngsam (1992-1997), which was popularly believed to be responsible for the economic meltdown. In the run up to the election held in the winter of 1997, Kim DaeJung and his left-wing political party was able to capitalize not only on public dissatisfaction with the incumbent conservative government but also on public anger directed at the dominant order, i.e., the Seoul-Bank- Chaebol nexus (Tiberghien 2007; Pirie 2009).

In concert with the Kim administration's reform agenda and the public consensus in favour of structural reform, MIC in September 1998 introduced a statutory amendment raising the ceiling on the maximum shares that could be owned by a single foreign entity to 49 percent and authorizing foreign ownership of shares in KT. As for the SSP segment,

where service providers lease lines from network owners to provide broadband service, 100 percent ownership was to be allowed beginning in 2001 (Jho 2003, 313). As for the mobile service sector, the ceiling was also set at 49 percent.

Furthermore, as post-crisis restructuring efforts were focused on both establishing new market-oriented institutions and enhancing the lackluster performance of market-oriented institutions, the later half of the 1990s and early 2000s witnessed the beginning of a more prominent role for such institutions, e.g., the Fair Trade Commission (FTC), a regulatory body charged with enforcing the Anti-Monopoly and Trade Act (MFTA). In 1997, Seoul granted the FTC the full status of a ministry with a view to enhancing its autonomy and authority.

The rise of the FTC vis-à-vis MIC undercut the latter's strategically-oriented policy initiatives. In promoting a small number of "national champions" -- SK, KT and LG-- through the late 1990s and into the early 2000s, MIC had often clashed with FTC over the latter's promotion of free competition and monitoring of markets to ensure compliance with anti-trust laws.

6.2.1 Seoul's Imperative to Restore the Confidence of Foreign Capital: AIG-Newbridge Capital Win of Hanaro (2002-2003)

The victory of the consortium representing American International Group (AIG) and Newbridge Capital following an eighteen-month-long battle with LG for ownership control of *Hanaro*, the second largest broadband service provider in Korea, illuminates the internal conflicts plaguing the policymaking community, in both the private and public sector.

It is noteworthy that AIG-Newbridge Capital was the first foreign bidder to

succeed in acquiring ownership of a facility-based service provider in Korea. During the final stages of the bidding war, the Kim Daejung administration's commitment to improving the country's image as an hospitable place to invest, along with new policies aimed at attracting FDI, played a key role in tilting the balance in favor of AIG-Newbrige consortium. Competition between the two Chaebol groups, LG and SK, would also prove critical in this regard. By the early 2000s, *Hanaro* had accumulated an enormous debt owing to its acquisition strategy and intense competition in a rapidly converging telecommunications market. In 2003 alone, the company was compelled to pay down its debt by \$254 million (Korea Times, 2003).

LG, *Hanaro*'s largest shareholder, first made a bid to acquire *Hanaro* in 2001. As with other major service providers, it had actively pursued an acquisition strategy. In 1999, it acquired Dacom, a long distance service provider, and in December 2002, entered the cable business, acquiring Powercomm, the country's second largest cable modem provider (Yoo 2004, 188-189).

In early 2002, a consortium led by AIG and Newbridge Capital launched a bid to acquire *Hanaro*. SK soon joined this consortium as a strategic investor. LG responded by affiliating with the US-based Carlyle Group, a private equity firm, in a bid to have the consortium sweeten its initial offer.

From this point on, efforts to win shareholder approval to buy ownership control of *Hanaro* were hamstrung by what is referred to as "cross-ownership", a practice that remains a long-standing feature of the corporate ownership structure in Korea (Yoo 189). Cross shareholding/cross ownership refers to an equity alliance among Korean Chaebols, that requires them to purchase each other's shares for the purpose of staving off hostile

takeover bids by foreign companies (Korea Times, December 2005). However, owing to the sheer size of their stock holdings in one another, neither could muster the requisite support to obtain the shareholder approval for the bid. The contest between LG and the AIG-Newbridge consortium remained in limbo from late 2001 to early 2003; Hanaro, too, languished despite two competing takeover bids (Yoo 189).

Faithful to its vision of three-way competition, or the policy to promote three “national champions”, e.g., SK, LG, and KT, MIC hoped to enhance LG’s status to the point where the company would be on an equal footing with both KT and SK. Since its 1996 entry into the mobile service market, LG had languished behind wireline powerhouse KT and wireless leader SK. However, both the Kim administration (1997-2003) and the FTC would prove to be out of sympathy with MIC’s three-way competition model

The Kim DaeJung administration (1998-2003) initially supported LG’s acquisition strategy. Indeed, Seoul supported the company’s bid to acquire Dacom in 1999 as a reward for its cooperation at the time of the 1999 Seoul-led “Big Deal”^{xi}, an initiative, born of the financial crisis, aimed at streamlining business operations and, in particular, forcing LG to give up its semiconductor business.

With the Kim administration’s support, LG acquired Dacom in 1999, notwithstanding its ranking as the smallest of the three national wireless providers. However, the company’s subsequent expansion and the attendant debt it incurred, combined with the quickening pace of concentration in a telecommunications sector increasingly dominated by a handful of Chaebols, gave cause for concern within both the administration and the FTC.

At the same time, Seoul feared that its “market friendly” image may be under threat. This explains the efforts on the part of the Kim DaeJung administration, both during and after the 1997-1998 financial crisis, to develop market-oriented institutions and overhaul the country’s image as a hospitable place to do business. While the bidding war over *Hanaro* raged, the local media adhered to the traditional state line regarding foreign ownership, all the while agonizing over the possibility that AIG-Newbridge might even insist on the right to appoint the company’s CEO (Korea Times 2003). Seoul feared that so contentious an M&A might tarnish it’s “market- friendly” image and drive out badly needed foreign capital.

Although it was *Hanaro* that favored the AIG-Newbridge side in the takeover bid, speculation was rife that the AIG-Newbridge’s victory signified SK’s overpowering economic clout in the Korean economy and its determination to block LG from expanding into the local telecommunications market in which it had a major stake. Many believe, moreover, that Seoul, hoping to project a market-friendly image, also stood behind the AIG-Newbridge consortium

Chapter 7: MIC's Policy Setback in its efforts to Coordinate Network Strategies among Local Service Providers in the 3G Market

In the late 1990s, there transpired at the international level a coordinated effort to prevent individual countries from adopting incompatible technology standards with a view to obstructing competition as had occurred in the case of the 2G market. In 1999, the International Telecommunications Union (ITU), a UN organization charged with, among other things, approving telecommunications standards, led international efforts aimed at setting standards for the “global” 3G mobile market. The same year, ITU designated two global standards for this emerging market: W-CDMA and CDMA2000 (Kushida 2008, 233; Jho 2007, 132-334)^{xii}.

7.1 International Telecommunications Union (ITU)'s Standard Setting Effort (1999) and Emergence of W-CDMA as a de facto standard

By 2002, of the service providers in the 3G market, a greater number were using W-CDMA2000 as opposed to the CDMA2000 standard. For W-CDMA-based equipment manufacturers, this development created the potential for economies of scale. With W-CDMA emerging as the *de facto* standard for the global 3G market, however, Korean service providers -- SK, KT, and LG -- would become increasingly uncertain about the future of CDMA2000 technology -- an upgrade of CDMA, which they had adopted for the 2G market. For this reason, the outlook for using CDMA in the 4G market appears gloomy (Jho 2007, 134)^{xiii}.

The advent of W-CDMA as the *de facto* global standard for the 3G market, along with the emerging prospect of both global marketing, which was heralded by the 1997 WTO agreement on basic telecommunications, and transnational connectivity, changed the dynamics of the policymaking process, in particular by altering the “policy

preferences” of Korean service providers (Keohane and Milner 1996). For service providers SK, KT, and LG, globalization and entry to the 3G market represented both risk and opportunity. The opportunity lay in the potential benefits to be derived from economies of scale, the risk in losing their competitive edge in delivering 3G service, whose critical feature was transnational roaming -- an inevitability should service providers fail to adopt the most widely used standard. In other words, they feared the potential cost of not following the global trend (Keohane and Milner 1996).

7.2 Change in Policy Preferences for Korean Service Providers

MIC’s standardization of CDMA for the 2G market in early 1990s was designed primarily to promote the international competitiveness of handset manufacturers; the service providers were recruited merely to serve the interests of MIC and the manufacturers. Namely, in having the service providers adopt the CDMA network, which was inaccessible to foreign manufacturers, e.g., Motorola, MIC aimed at shielding local producers from foreign competition so that manufacturers might gain technological competency. At the time, the service providers did not take issue with this policy. However, by the early 2000s, the economic policymaking environment, in general, and that related to the telecommunications industry, in particular, had changed dramatically. With the privatization of SK (previously KMT) and KT ^{xiv}, MIC could no longer exercise as much influence on these service providers as was the case in the early 1990s.

Since the mid-1990s, the chief factor contributing to driving a wedge between MIC and the service providers pertained to changes in the way in which the latter went about financing their investments. As mentioned earlier, Seoul had liberalized a series of capital controls in 1994, a move that had effect of allowing the Chaebols, including LG and SK,

access to global capital markets^{xv}. Having gained independence from Seoul so far as R&D and financial support was concerned, the service providers were increasingly less willing to heed MIC advice, or for that matter bend to Ministerial pressure, and more attuned to market signals communicating opportunities and risks.

In regard to adopting a technology standard for the 3G market, MIC's preference for CDMA 2000, whose applicability was limited to the domestic market, represented a high-risk gamble for service providers given that it would undermine their chances at succeeding in a global market where W-CDMA predominated. Overall, changes in the policy preferences of service providers had the effect of heightening conflict with MIC, who persisted in adhering to its traditional policy of sacrificing the interests of service providers with a view to strengthening the telecommunications manufacturing base, i.e., serving the interest of local manufacturers (Jho 2007, 132)

7.2.1 MIC's pursuit of Traditional Values

From MIC's perspective, both W-CDMA and CDMA2000 represented viable options. The former has proved to be the more economically viable as it appears to be gaining currency among major service providers in both Europe and Japan. In this respect, MIC was in agreement with local service providers. However, in political terms CDMA2000 remained an important option for MIC as an organization. Within MIC, the policy of standardizing CDMA was deemed one of its most successful achievements -- a source of considerable pride. Despite being latecomers to the mobile device market, Korean manufacturers were able, owing to CDMA standardization in the early 1990s, to make a successful debut in the handset market. Beginning in the late 1990s and extending into the early 2000s, Samsung and LG would gain a firm foothold in the CDMA-based

handset market in countries such as the US, Canada, Hong Kong and Korea.

Despite, in the wake of structural changes to the Korean economy, a weakening in the traditional alliance between manufacturers and MIC, it has proved still to be “politically” viable owing to MIC’s organizational interest in preserving the political legacy of earlier achievements (Jho 2007, 132).

7.2.2 MIC Coordinating effort for technology choices for domestic 3G market and the Policy Failure in Coordination

To avoid violating the WTO “technical barrier” agreement, Seoul, in the early 2000s, abandoned an explicit standard-setting strategy aimed at designating CDMA as a *de jure* standard and opted instead for a “modified” technology coordination strategy. With this end in view, in 2000, the government created the Information and Telecommunications Policy Deliberations Committee (ITPDC) for the purpose of resolving conflicts among MIC and the service providers and manufacturers over which 3G technology standard to be deployed in the domestic market. (Jho 2007, 132). In fact, MIC used the Committee to pressure service providers to choose CDMA2000 over the more popular W-CDMA (Jho 2007, 132).

However, despite MIC’s best efforts, during the 2000 negotiation process, all three bidders for 3G licenses -- SK, LG, KT -- stood by their respective decisions. In the end, none were willing to follow MIC’s recommendation to deploy CDMA2000 (Jho 2007, 133). In fact, the decline in MIC’s political leverage over the service providers can also be seen in its failure to address the differences and inability to designate a single standard for the local 3G market. Indeed, in August 2000, when Son Hong, Director General of the Telecommunications Policy Bureau at MIC, openly supported CDMA2000, the service providers paid no heed (Jho 2007, 132). And when MIC insisted

that two of the three principal carriers choose W-CDMA and the other CDMA, service providers refused to comply. In October 2000, all three applied for W-CDMA licenses.

In 2000, MIC issued the SK and KT consortia licenses for W-CDMA. At the same time, it publicized a plan to allocate an additional license at a later date, hoping that LG would apply for a CDMA2000 license at that time. Although LG initially declined this offer, in 2001 it accepted MIC's offer, prompted by a significantly lower licensing fee -- approximately \$900 million, which compared to the standard rate in, for example, France and Germany of approximately \$4.5 and \$7.7 billion, respectively, was a bargain indeed (ITU 2001).

7.2.3 MIC's Licensing and Policy Outcomes

During the early 2000s, major service providers across the globe were slow both to introduce the new W-CDMA standard and develop consumer markets for 3G mobile services. Rather than blindly comply with MIC policies, Korean service providers responded instead to market signals and developments, which explains why they were slow to implement the network technologies assigned them by MIC -- W-CDMA for SK and KT, CDMA2000 for LG.

Until the mid-2000s, no major service provider in either North America or Europe had deployed 3G-network technologies. Indeed, adoption of 3G/W-CDMA abroad would prove to be relatively slow owing to the high costs involved. Because W-CDMA networks use different radio frequencies than their 2G/CDMA counterparts, service providers were required to build new networks^{xvi} and license new frequencies, especially if they wished to achieve high data transmission rates. These disincentives had the effect of delaying deployment. It was not until the mid-2000s, when the global trend to

deploying 3G network technologies became clear that service providers were willing to commit themselves. In Canada, in 2005, Bell Mobility, Sask Tel and Telus all launched CDMA2000-based services; Rogers Wireless implemented W-CDMA in Eastern Canada in late 2006; China Unicom deployed W-CDMA but announced it would end CDMA2000-based services in 2008; China Telecom then launched a CDMA2000-based 3G service in 2008.

Both in Korea and abroad, the early 2000s also witnessed slow growth in the consumer market for 3G services. Jho (2007) cites low subscription rates for W-CDMA during this period as the reason MIC and the service providers refused to announce in official public documents their plans to invest in W-CDMA technology (Jho 2007). Indeed, 2G and 3G would co-existed for some time as many mobile customers failed to see any immediate need for the full range of 3G services (Xavier 2001, 30).

In fact, it was not until the late-2000s, following the introduction of 3G technology-based/W-CDMA-based devices -- PDA, smartphones, iPhones and the Android family -- that SK and KT rushed into creating W-CDMA-based networks. Meanwhile, in the early 2000s, as local consumer markets came to be dominated by 2.5G technology-based handsets -- i.e., CDMA 1xEV-DO^{xvii} and W-CDMA HSDPA-based handsets, the inferior versions of CDMA2000 and WCDMA, respectively -- SK and KTF hedged their bets on CDMA2000 and W-CDMA technologies by continuing to upgrade both networks, albeit with inferior technologies (Kushida 2008).

Over the short run, the 2.5G/CDMA 2000 1x EVDO technology based network, which represented an intermediate technology between CDMA and CDMA2000, sufficed to meet local consumer demand as it could offer a higher transmission speed than the

existing CDMA. On the other hand, as the service providers had divided their development efforts between the CDMA2000 and W-CDMA breeds, over the long run, it was relatively easy for them to focus on investing in W-CDMA, which in the later half of 2000s would become the dominant global 3G network technology. However, at the end of the day, neither KT nor SK succeeded in exploiting economies of scale as they had once hoped.

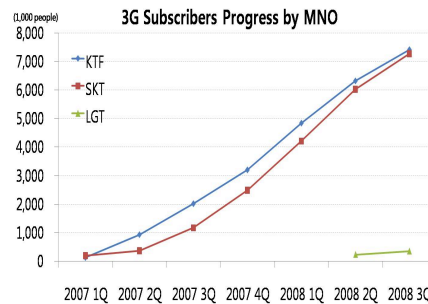
Figure 1 Technology Choices of Service Providers and 3G subscriptions

Licensing Scheme for 2G and 3G

2G	3G
CDMA (SKT, LG, KTF)	WCDMA (SKT, KTF)
	CDMA2000 (LGT)

Real Life Choice of Service Providers* (SK and KTF) Technologies

2G	2.5G	3G
CDMA	CDMA2000 1x CDMA2000 1xEV-DO	WCDMA



(Source: Kushida 2008, 249; Source: KCC)

Chapter 8: The 2008 Institutional Restructuring and Reincarnation of Strategic Policymaking

The policy outcomes that informed service providers' operational and investment decisions during the period extending from the early to the mid-2000s demonstrate that "getting the policy right" would no longer suffice. In particular, with regard to its efforts aimed at persuading the service providers to choose its preferred technology, e.g., CDMA2000, MIC proved lacking both in the jurisdictional and political clout required to enforce its will. Indeed, lack of "prompt" compliance on the part of service providers, along with the attendant regulatory uncertainty in the 3G mobile service industry through the early to the mid-2000s, created a crisis of state authority.

8.1 Demise of MIC and Its Replacement by KCC (2008 to the present) as the Dominant Regulator and Policymaker in Telecommunications industry

Owing to the structural changes that had occurred to the national economy in general and the corporate structure in particular following the 1997-1998 financial crisis, the differences in outlook between the MIC and the service providers were widening. It was inevitable that the Ministry's strategically oriented policymaking would appear to be out of sync with the economic reality confronting the corporate sector. Jho notes the rising discontent among service providers with regard to MIC efforts aimed at imposing the Ministry's strategically oriented policy choices regarding 3G mobile technology (Jho 2007 133).

Nor were the manufacturers satisfied with MIC policy outcomes^{xviii}. Representing the major beneficiaries of CDMA standardization in the early 1990s, and leading commanding position in the global CDMA-based handset market, Samsung, and LG hoped that MIC could obtain concessions from service providers and secure them a small

yet lucrative domestic market (Jho 2007, 132). As it turned out, in the later half of the 2000s competition in the domestic 3G mobile handset market would prove considerably “tougher” than had been case for the 2G market. When iPhone entered the market in 2010, it quickly won a 30 percent market share.

It was the against this backdrop of MIC’s growing political irrelevance and regulatory inefficacy that the Roh MooHyun administration (2003-2007) appointed an ad hoc committee to establish a politically independent and legally effective regulator in place of MIC. The Korean Communications Commission (KCC) was modeled on the US Federation of Communications Commission (FCC). Although KCC had existed since 1992 as a regulatory body charged with promoting fair competition in the telecommunications industry, its autonomy had been nominal at best, and it had played only a minor role in liberalizing the industry through the 1990s (OECD 2000; Pirie 2009, 97)^{xix}. Under the 2008 Government Organization Act, KCC was given jurisdiction over both the broadcasting and telecommunications industries; regarding the latter, it was charged with regulating media content and promoting fair competition.

8.2 Continuation of Strategic Policymaking: Ministry of Knowledge and Economy and the Telecommunications Technology Association (TTA)

Under the 2008 Government Organization Act, Seoul brought the IT-related manufacturers and telecommunications service providers under the jurisdictions of the Ministry of Knowledge and Economy (MKE) (2008-Present) and the KCC, respectively. It was MKE that succeeded MIC in the strategic policymaking role. The most prominent of MKE’s IT-related programs was labeled World Best Software (WBS).

Beginning in 2010 and continuing through 2012, MKE has made available \$1.43

million (US) in subsidies to small and medium enterprises (SMEs). Under WBS, the Ministry has encouraged SMEs to form consortia with a view to cooperating in the development of software programs, creating the National IT Industry Promotion Agency (NIPA) to undertake “quality control” through all developmental stages (Korea IT Times 2012, Sept 2012). Currently 27 software tasks pertaining to smart TV and 3D medicine imaging are underway under the WBS program.

Technology standardization in the telecommunications industry is the responsibility of the Telecommunications Technology Association (TTA), a private industry association (Kwak 2011, 794). TTA is primarily concerned with coordinating standardization strategies among IT experts, companies and investors; it also promotes Korean technology globally, through lobbying and cooperation with foreign players and organizations.

8.3 Further Structural Changes to the Korean Economy in the later half of the 2000s and Decline of the State’s Political Leverage over the Chaebols

What has been the fate of the country’s economic institutions following drastic restructuring since the 1997-1998 financial crisis, and what are the implications both for MIC and MKE’s strategic policymaking functions and local service providers and manufacturers in the telecommunications industry? In contrast to the institutions existing in the telecommunications sector, where MIC remains in charge of strategic policymaking and are shielded from the direct impact of restructuring, those in financial sector have borne the brunt of it.

President Kim DaeJung (1998-2003) and the reformers concurred in believing that the major obstacles to strengthening market-oriented institutions and measures -- policies aimed at reducing debt levels and improving profitability in the corporate sector -

- lay in the political influence exercised by the government over the lending decisions of banks and the traditional state-bank-Chaebols nexus. The economic crisis, along with attendant political circumstances conducive to reform, provided the administration with the opportunity to form a political coalition with the IMF and reformers at EPB and MOFE (Tiberghien 2007; Shin 2007, and Pirie 2009).

With a view to ending the government's political interference with respect to capital allocation, reducing credit flows to Chaebols, and further integrating the Korean economy into global capital markets and production networks, Seoul established in 1998 an independent regulator, the Financial Supervisory Commission (FSC) as well as an independent central bank. FSC was designed to regulate and supervise financial institutions independently of Seoul's interference. By prioritizing the soundness of Korean financial institutions above all else, FSC eliminated the practice on the part of the banks of lending large sums to the Chaebols merely to advance their, i.e., the Chaebols, strategic interests and those of the state.

To facilitate restructuring efforts aimed at ending the state-bank-Chaebol nexus, both the Kim (1998-2003) and Roh administrations (2003-2008) worked to increase foreign ownership in Korean financial institutions. Foreign ownership of the large commercial banks had mushroomed since the financial crisis, and giant multinational banks had grown to dominate the Korean commercial banking sector in an economy where, traditionally, corporate investment funding relied heavily on commercial bank loans (Shin 2007, 89).

By mid-2005, foreign banks had acquired more than half the shares in seven of the eight largest commercial banks in the country: 100 percent of Korea First (now

owned by Standard Chartered); 76 percent of Hana; 84 percent of Kookmin; 63 percent of Shinhan. Publicly owned Woori remains the only major bank not owned primarily by foreigners (Shin 2007, 85)^{xx}. Given such drastic changes to the country's economic structure, it is hardly surprising that state-led projects requiring coordinated efforts on the part of the Chaebols and Seoul are increasingly prone to failure.

A recent example is the state policy initiative aimed at developing a locally designed software component, the Operation System (OS) for mobile devices, to complement the hardware in Korean handsets. In 2011, MKE proposed that LG and Samsung form a consortium to design and commercialize a locally designed software operating system for mobile devices with a view to complementing the success of the domestic hardware manufacturers. The idea first came to the fore, when in August 2011, Google, a major client of Korean handset manufacturers and supplier of software for Korean handsets, i.e., the Android OS system, acquired Motorola, a US handset manufacturer. The news created a sense of crisis among Korean manufacturers who feared losing an important client and supplier. Nevertheless, MKE's initiative did not come to fruition as Samsung and LG were unable to resolve their differences.

Chapter 9: Conclusion

This paper has shown that in formulating strategically oriented policies aiming to promote “some” economic sectors, i.e., exporters/manufacturers, even at the expense of others, conservative elements within the Korean state bureaucracy have continued up to the present day to wield significant influence over policymaking. In particular, attention was drawn to the propensity on the part of state organizations, such as MIC, to fight for their political survival vis-à-vis other state organizations, local private interest groups, and foreign capital.

Equally important, this paper has highlighted the declining efficacy of strategic policymaking efforts on the part of the Korean state in the context of ongoing democratization and economic liberalization. It has done so by drawing attention to the conflict of ideas and interests within the Korean state bureaucracy and the diminishing political leverage of the state over local and foreign capital in the area of policymaking over the last three decades -- a period that witnessed the emergence of interest group politics following democratization in the 1980s and the rise of powerful local conglomerates capable of challenging state policy initiatives, following economic liberalization (early 1990s to early 2000s).

This paper has also taken note of the dramatic political realignment between the state and the Chaebols. Beginning in 1994, the latter could raise capital and invest abroad, free of government regulations. Given their increasingly “outward looking” business orientation, the Chaebols often clashed with the state as the latter’s strategically-oriented policies appeared to be an obstacle to their business operations. More

importantly, given that these syndicates are now responsible for generating 80 percent of GDP (Hankyore October 2012), state policy initiatives that run counter to their interests are doomed to failure. Today, Seoul is heavily dependent on the Chaebols to build state-sponsored projects and create employment.

The rise of the Chaebols has not been entirely uncontested, as witnessed by efforts on the part of President Kim Young Sam (1993-1997) to increase state leverage over these syndicates by consolidating state ministries, e.g., by merging MOTIE and MOC to form MIC. Also noteworthy in this regard are the drastic institutional reforms and corporate restructuring efforts undertaken by the Kim DaeJung administration (1998-2003) during the 1997-1998 financial crisis, which opened up an opportunity to capitalize on popular discontent directed against the previous conservative government and the Chaebols system.

Today, it is doubtful whether presidential initiatives or bureaucratic restructuring “alone” can produce the kind of results attainable in the past. Today, the political challenges inherent in realizing policy goals that run counter to the interests of great concentrations of economic and political power are historic, particularly in light of the vast amounts of foreign capital that have flowed into Korea since the 1997-1998 financial crisis. Indeed, foreign corporate ownership, especially in the case of the Chaebols, increased dramatically from 15 to 22 percent between 1997 and 1999 and from 37 to 43 percent between 2001 and 2004 (Crotty and Lee, 2007, 82). With mounting levels of foreign ownership come increasing foreign influence in the key areas of investment and managerial decision-making.

Representing 80 percent of GDP, Korea's Chaebols exercise enormous leverage over economy policymaking. Indeed, in observing that "we have already entered the age of big capital having the upper hand over the state (Lee 2011, 568), President Roh Moo Hyun (2003-2008) was merely expressing a *fait accompli*, namely, that the state was losing its power to regulate the Chaebols effectively. To reverse this trend would require a set of circumstances amounting to a national crisis and a leadership possessed of both remarkable ingenuity and independence vis-a-vis the established political and economic order. As things stand, this would be a miracle!

With regard to future studies on the Korean political economy, one should consider examining the lack of political representation for the "economic" interest of the country's middle class. Currently, economic policymaking discourse in Korea is dominated by two factions, one representing a market fundamentalism, the other the Chaebols, leaving no one to champion middle-class interests. The absence of adequate representation in economic policymaking has further exacerbated income disparities, while fostering apathy among the general public

ⁱ The purchase of Time Division Exchange (TDX), a locally developed switching system designed to support telephone services, represents a case in point (Yoo 2003, 171; Jin 2009). Owing to TDX's technical inferiority and high price relative to foreign imports, the sale of the TDX represented more in the way of a strategic success story for MOC and other local participants (i.e., researchers at state sponsored institutes, the Electronic Technology Research Institute (ETRI) and local industries who participated in MOC sponsored R&D) than the commercial success or a technical leap forward for KT.

ii

The 1G networks: The 1G services provided basic voice service through the analog network system. Frequency Division Multiple Access (FDMA) was common to all mobile telephone systems. FDMA was the original analog cellular concept, splitting the available frequency band into channels

The 2G network: The 2G service provided voice and data service through a digital network. These 2G wireless markets were divided by TDMA and CDMA digital transmission technologies. TDMA was the earliest form of GSM digital technology developed in Europe, while CDMA, which assigns a unique frequency code, developed in the US and Korea.

The 3G network/IMT-2000: The 3G network is characterized by seamless global roaming, which enables users to move across borders with higher transmission rates, offering a minimum speed of 2Mbps (ITU, 1999). The service allows users to transmit voice, data and moving images with mobile phones. Compared to 2G, the main improvements are access to the Internet and graphic content.

ⁱⁱⁱ The literature on standard setting process distinguishes between two types of standardization processes: one is market oriented/(de facto) standardization or de facto standardization as the latter arises from the market interaction and the other is state-led / (de jure)

standardization. Microsoft's Window is a good case in point for the de facto standard. The company could use corporate and network power to establish the Windows operating system as a de facto standard in many parts of the world. In the de jure case, public authorities set mandatory standards, which in turn obliges firms to enter into the market with specified technology (Jho 2007, 126).

^{iv} In December 1990, MOC renamed KTA, KT to give a more corporate image. The initial plans called for it to sell 25 percent of its share in the initial public offering with the sale of additional 24 percent planned for subsequent years. A downturn in Korean stock market led KT to defer these plans. Instead, it only sold off 10 percent of its stock in 1993, with another 10 percent sold in 1994.

^v Enacted in Dec 1991, the amendments divided carriers into two discrete categories. The first categories are known as "network service providers" (NSP) / "General Service Provider (GSP) that refer to those carriers that own the networks and provides the basic telecommunications voice service. The second categories are known as "value added service provider" (VSP) which comprises computer networking, intercompany electronic data interchange, electronic mail and data services and "specific service provider" (SSP) that covers paging services, cellular phone services, airport related communication, port-communications (Yoo 2004, 173).

^{vi} These categories were further divided according to whether they were international, long-distance or domestic services.

^{vii} In international long distance service, DACOM (Data communications Company of Korea) was licensed in 1990, and Onsei in 1996; for long distance, DACOM in 1995 and Onsei 1997. For local telephony, Hanaro was licensed in 1996 (Kushida 2007, 493). Previously, Dacom (launched in 1982) was barred from owning network facility and was instead leased them from KTA

^{viii} Nevertheless, construction of infrastructure project such as the KII was burdensome and unpopular to the private sector, as it involves massive investment and likely to be high risk with uncertainty about commercial outcomes and long-term commitment. Given this private corporation are usually less enthusiastic about plans. (Lee 2009, 570). In an attempt to involve KT and Dacom in the KII project, Kim administration (1992-1997) offered a variety of enticements: preferential tax treatment, the granting of new license, and loans underwritten by the government. KT and Dacom proves relatively easy targets for the administration at the time the state still remain the largest stockholder until KT was completely privatized (Lee 2011, 570). In order to induce cooperation from Dacom, The government had allow Dacom to acquire licenses for international and long distance telephone services during the national telecom phone restructurings between 1990-1994 respectively, which were initiated for the purpose of curbing the international pressure for telephone market liberalization and Dacom had rapidly remerged as the second largest telephone service carriers in Korea (Lee 2009, 571). Furthermore, by contributing public revenues into investment, KT and Dacom (now the LG Dacom) rather welcome, considering this as an opportunity to upgrade their copper lines to high-speed fiber optic network (Lee 2009, 571).

^{ix} MOC's strategic partner for the development of CDMA

^x Despite the large amount they invested in construction of new networks, service providers could not expect to recuperate their investments due by raising subscription fees due to high levels of competition.

^{xi} In the swapping of business operations on semiconductor in 1999, Seoul supported the Hynix (semiconductor subsidiary of Hyundai group) and Samsung while forcing LG to give up its business in semiconductor (Ning 2009, 150). In fact, many note in relation to Hynix bailout, crucial Hyundai group's support for government political goal in materializing the Summit meeting between North and South Korea in 2000.

^{xii} ITU's original aim for 3G was to create a single global standard. However, a political struggle over whose standard to use, with a European-Japanese Alliance attacked by the US government lobbying on behalf of Qualcomm's interests, led to the compromise where two incompatible standards were approved (Kushida 2009, 246).

^{xiii} Technologically speaking, given that W-CDMA is an upgrade of GSM, W-CDMA receive support from countries in Europe and Japan, that adopted GSM as local technology standard for 2 G market. The CDMA2000, developed by Qualcomm, was achieved through incremental upgrades of the existing CDMA standard used in Korea and North America and receive support from US and Korea

^{xiv} Prior to the completion of privation in 2003, MIC still retain 28.36 percent stake in KT

^{xv} From 1997, SMEs gained the access to global capital market

^{xvi} Others delays were due to the expenses of upgrading transmission facilities, especially, for UMTS, whose deployment required the replacement of most broadcast towers. Due to these technical and financial issues with deployment, many carriers were not able to or delayed acquisition of these updated capabilities

^{xvii} even though they could never reach full-fledged CDMA2000 since they were licensed for W-CDMA

^{xviii} Manufacturers, in general, did not want to take a strong public position that could jeopardize their existing and future business relationships in domestic and international market. However, potential market opportunities for manufacturers in Asia and America market affected a country's standard choice. It was clear Samsung had a good presence in CDMA market exporting CDMA handset and networks to 2G international markets. Technology standard in the Korean 3G market had important implications for other countries, which were the main targets for Korean manufacturers. Samsung and LGIC wanted to expand their share of the growing Asian market with China's potential market.

^{xix} KCC was charged with ensuring fair competition in the sector through arbitration of disputes, fact finding on unfair practices, examination of competition –related rules and regulations and proposing corrective measures against unfair practices (OECD 2000)

^{xx} As early as 2003, it turned out that foreign-owned banks are far more insulated from political pressure, i.e., to conform with Seoul’s economic policies, than had their domestic counterparts. Both foreign-owned Korean Exchange Bank and KorAm refused the government’s request to participate in the \$4.2 billion bailout of LG Card, the nation’s largest credit card issuer when it faced bankruptcy in 2003.

Bibliography

- Bok, Hong-Seok and Park, Sangin “ Effective Competition, Administrative Guidance and Collusion in the Telecommunications Sector” The Korean Journal of Policy Studies, Vol 23. No. 2 (2009): 189-200
- Bloomberg “AIG, Newbridge Win Approval to buy Hanaro Control” (October 21, 2003) n.pag. Online.
Internet. October 12th, 2012
Available:<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a2beIX5fMFyM&refer=us>
- Chang, SeungWha “ Korea Competition Law and Policies in Perspective” Northwestern Journal of International Law & Business 26.3 (Spring 2006)
- Chang, HaJoon and Shin, JangSup. Restructuring Korea Inc. London: Routledge, 2003
- Cho Mu-Hyun “Schmidt’s Agenda for Korea” The Korean Times (September 24th, 2012)
- Chung, Yunho “2008 Top News on Korea Technology Market” (December 31, 2008): n.pag. Online.
Internet. October 22th, 2012 Available:
<http://www.koreaninsight.com/2008/12/2008-top-10-news-on-korean-technology-market-part-2/>
- Crotty, James and Lee KangKook. “From East Asian Miracle to Neoliberal Mediocrity” Ed. Shin JangSup Global Challenges and Local Responses London: Routledge Studies, 2007.
- Evans, Peter. Embedded Autonomy New York: Princeton University Press, 1995
- Forge, Simon “Managed Innovation in Korea in telecommunications-Moving Towards 4G mobile at a national level” Telematics and Informatics 25 (2008): 292-308.
- Haggard, Stephane and Lim, Wonhyuk Economic Crisis and Corporate Restructuring in Korea: Reforming the Chaebol New York: Cambridge University Press, 2003
- Hall, Peter. “ Economic Policy and the Paradigm of Politics” Ed. Joel Krieger Governing The Economy New York: Oxford University Press, 1986

- Harvie, Charles and Hyun Lee “Towards a New Economic Development Model for Korea” The Korean Economy Beyond Crisis, New York: Edward Elgar Publishing Inc, 2004
- Harvie, Charles “Corporate Restructuring in the Wake of the Financial Crisis” The Korean Economy Beyond Crisis, New York: Edward Elgar Publishing Inc, 2004
- Hart-Landsberg, Martin. Marxist Perspectives on South Korea in the Global Economy New York: Ashgate Pub Co, 2007
- Hundt, David. “A Legitimate Paradox: Neo-Liberal Reform and the Return of the State in Korea.” Journal of Development Studies. 41.2 (February 2005): 242-260
- Jho, Whasun. “Building Telecom Markets: Evolution of Governance in the Korean Mobile Telecommunications Market” ProQuest Dissertations and Theses (2003)
- Jho, Whasun “Global Political Economy of Technology Standardization: A case of the Korean mobile telecommunications Market” Telecommunications Policy 31 (2007): 124-138
- Jin, DalYong Hands on and Hands off : The Korean State and The Market Liberalization of the Communication Industry. New York: Hampton Press Inc: 2011
- Jin, DalYong “Political and Economic Processes in the privatization of the Korean telecommunications industry: A case study of Korea Telecom, 1987-2003” Telecommunication Policy 30 (2006): 3-13
- Kwak, Jooyoung, Lee, Heejin and Fomin, Vladislav “Government Coordination of Conflicting interests in standardization: case studies of indigenous ICT standards in China and South Korea” Technology Analysis & Strategic Management Vol 23 No. 7 August (2011), 789-806
- Kwak, Vivian “SK telecom Acquiring Control of Hanaro” for 1.2 billions” Forbes.Com (December 3rd 2007) : n.pag. Online. Internet. August 24th, 2012. Available: http://www.forbes.com/2007/12/03/sk-hanaro-telecom-markets-equity-cx_vk_1203markets2.html
- Kim, Wonshik and Kim, Jihoon “Reforms of Administrative Regulations in ICT in South Korea (Feb 2002) KISDI Korean language

- Kim, E. Han “Changes in Korea Corporate Governance: A Response to Crisis” Journal of Applied Corporate Finance. Morgan Stanley Publication Winter (2008)
- Kim, SangJoh “Issues about Distribution and Growth and Corporate Governance” 3rd Conference on Alternative Strategies (2011 June) (Korean Language)
- Kim, SeungYul “ Top 3 Korean Telecommunication Companies: A Rare Look into Their Strategies and Competition: Advanced Technology in Korea (October 19th, 2011): <http://www.advancedtechnologykorea.com/8218>
- Kim SungMi “ Government Policy Trend in Korea’s Software R&D” Korea IT Times 18th September, 2012)” n.pag. Online. Internet. October 24th, 2012. Available: <http://www.koreaittimes.com/story/23546/government-policy-trends-korea’s-software-rd>
- Keohane, Robert and Miller, Helen. ed. Internationalization and Domestic Politics New York: Cambridge University Press, 1996
- Kwon, EunJung “Top Ten Chaebol now Almost 80 Percent of Korean Economy” The HanKyoReh (August, 28th, 2012) http://english.hani.co.kr/arti/english_edition/e_business/549028.html
- Kushida, Kenji and Oh Seung-Youn. “The Political Economies of Broadband Development in Korea and Japan” Asian Survey Vol.26. No.3 (May/June 2007): 481-504
- Kushida, Kenji “Wireless Bound and Unbound: The Political Shaping Cellular Markets in Japan and Korea” Journal of Information Technology & Politics Vol. 5 (2) (2008): 231-254
- Kwak, Jooyoung and Lee, Hee Jin and Fomin, Iadislave V. “Government Coordination of Conflicting Interests in Standardization: Case Studies of Indigenous ICT Standards In China and South Korea. Technology Analysis & Strategic Management. Vol. 23, No. &. (Aug 2011): 789-806
- Kwak, JungSoo “ Chaebol Leaders Exercise Power without Responsibility” The HanKyoReh 28th September 2011
- Lee, Heejin and Oh Sangjo. “The Political Economy of Standards setting by Newcomers: China’s WAPI and South Korea’s WIPI” Telecommunications Policy 32 (2008), 662-671.
- Lee, Kwang-Suk “A final Flowering of the Developmental State: The IT policy Experiment of the Korean Information Infrastructure, 1995-2005. Government Information Quarterly 26 (2009): 567-576.

- Lee, Kwang-Suk. IT Development in Korea: Broadband Nirvana London: Routledge 2012
- Mah Jai S “Industrial Policy and Economic Development: Korea’s Experience” Journal of Economic Issues” Vol.41 (1) (March 2007)
- Pirie, Iain. The Korean Developmental State: From Dirigisme to Neoliberalism London: Routledge Studies, 2009
- Ryu, Yi Geun. “Steep Increase in Inequality since 1990s” TheHankyoreh 25th October 2012
- Rhee, Jong-Chan “The State-led Governance of Telecommunications Service Industry: The South Korean Case” Journal of East Asia Affairs Institute for National Security Strategy, 2009
- Shin. JangSup. Global Challenges and Local Response: The East Asian Experience. Rutledge Studies. New York: Routledge Studies, 2007
- Information Communications Technology Index: n.pag. Online. Internet. October 24th, 2012. Available: <http://icti.or.kr/Main/Main.aspx>
- Suh, Joonah and Chen, Derek H.C. Korea as a Knowledge Economy Washington: World Bank Publication, 2007
- Sande, Steven “Korea’s SK Telecom, KT in Talks with Apple about LTE service” TUAW (August 15th 2012): n.pag. Online. Internet. August 11th, 2012. Available: <http://www.tuaw.com/2012/08/15/koreas-sk-telecom-kt-in-talks-with-apple-about-lte-service/>
- Woo-Cummings, Meredith. Developmental State Ed. Meredith Woo-Cummings New York: Cornell University, 1999
- Woo-Cummings, Meredith. Neoliberalism And Institutional Reform In East Asia: A Comparative Study. UN Research Institute for Social and Development. New York: Palgrave Macmillan, 2007
- Tiberghien, Yves. Entrepreneurial State: Reforming Corporate Governance in France, Japan and Korea New York: Cornell University, 2007
- Telecommunications Technology Associaton: n.pag. Online. Internet. July 24th, 2012. Available:

http://www.tta.or.kr/English/new/external_relations/agreement.jsp

Telecompaper “Google Defends Network Neutrality in Korea” Internet (July 16th, 2012):
n.pag. Online.

Internet. July 24th, 2012. Available:

<http://www.telecompaper.com/news/google-exec-defends-network-neutrality-in-korea--884702>

World Bank Institute Korea and the Knowledge-based Economy:

Making the Transition The International Bank for Reconstruction and
Development 2000

Yoo, Christopher “The unfulfilled Promise of Korean Telecommunications Reform” ed.

Tom Ginsburg Legal Reform In Korea, London: RoutledgeCurzon 2004